ABSTRACT

On closing the door, that is conventionally hinged to the vehicle body, keys of interengagable assemblies smoothly engage with mating receptacles located on both pillars, the vehicle roof and side rail. The smooth interengagement is ensured by the adjusting mechanisms of the keys, located on the front, rear, upper and lower reinforced portion of the door, to reduce large clearances between them and their receptacles to minimum tolerances. In an accident the door tightly mates with the door-aperture of vehicle body whereby energy is distributed to the integrated vehicle body.

In the second feature of invention, the interengagable assemblies of a vehicular couple, consisting of the portion of the door and a member of the vehicle body, are arranged in at least two operating planes.

In the third feature, the deformation of the series-connected doors and their common pillar is constrained in an accident owing to an extension member, rigidly attached to the common pillar, accommodating the keys, which tightly mate with the receptacles located on the rear portion of the front door and the front portion of the rear door.

In the fourth and fifth feature, the interengagable assemblies of the vehicular couple are arranged in multi-operating planes thus cutting costs associated with less adjusting work to reduce large clearances to small tolerances.

This inventive technology is applicable for other door-types such as tailgate-, sliding side-, cargo-, liftgate door, trunk cover and hood to define a substantially stiffer vehicle body whereby stress is enormously decreased in an accident.

OTHER PUBLICATIONS

[1] 53-page report of 2nd version "A million injuries and $ billion loss per year due to failure of prior art and insufficient R&D work" by Go

[2] Problematik der Auslegung von Schraubendruckfedern unter Berücksichtigung des Abwälzverhaltens (Go, Automobil-Industrie 3/82, pp 359-367)

[3] Zum Schwingungsverhalten von Schraubendruckfedern (Go, ATZ 84 (1982), pp 223-226)

[4] World-wide safest, expensive German sport car in rollover ref. to accident report of Wiesbadener Kurier of July 27, 1998 and Go's report

[5] Brand-new luxury German car in side collision and rollover ref. to Go's report

[6] Luxury German car in front collision ref. to Wiesbadener Tagblatt of Aug. 1, 1996

[7] Brand-new luxury German car in side collision and rollover ref. to Wiesbadener Tagblatt of Nov. 21, 1997

[8] Small German car in side collision ref. to Wiesbadener Tagblatt of Oct. 7, 1996

[9] Unknown car in side collision and rollover ref. to Wiesbadener Tagblatt of Oct. 1 1996

[10] Convertible German car in rollover ref. to Wiesbadener Tagblatt of Nov. 09, 1998

[11] Luxury German car in side collision ref. to Wiesbadener Tagblatt of Dec. 3, 1994

[12] Top luxury German car in rollover ref. to Go's report

[13] German car of an American car manufacturer, having sufficient test results in crash tests, in rear collision and rollover ref. to Go's report

[14] Italian compact car in front collision ref. to Wiesbadener Tagblatt of Sept. 30, 1997

[15] Research work "Vehicle Safety in 1990s" ("Fahrzeugsicherheit 90") by Institute of Vehicle Safety (German NHSTA), a Dept. of German Insurers Association, in Munich

[16] Auto Motor and Sport issue 12/1997 pp. 28 "gleichmäßige enge Spaltmaße"

[17] Auto Motor and Sport issue 18/1996 pp. 28 "Neue Qualität in der Optik: 3.5 mm breite Spalte" stated by VW CEO Dr. -Ing. Ferdinand Piëch.

[18] ADAC issue 9/1995

[19] NHSTA's letter of a director of Nov. 24, 98

Reference to the following car

[4] Porsche 911
[5] VW VR6
[6] BMW 5
[7] BMW 5
[8] Opel Corsa
[9] Unknown car
[10] Convertible car BMW 3
[11] MB 190
[12] MB E320
[13] Ford Escort
[14] Fiat Tipo